MALS-14
R134 ECU Testing

CWO5 Art LeBlanc
AVO

GySgt Ward
SNCOIC 990

History

- Initial Delivery started in May 2008
- Current on hand 55 units
  - R134A ECU Failures (19)
    - 2 bad compressors
    - 2 bad indoor blowers
    - 2 leaking Freon from high side
    - 9 outdoor fans contacting outdoor coil/Bracket
    - 2 outdoor fan motors failed
    - 1 bad transformer
    - 1 bad main contactor

ECU Physical Differences

Freon	R22	R134A
Outdoor fan motor rating	¾ HP	1 HP
Outdoor fan motor speed	1,044 RPM	1,625 RPM
Outdoor fan motor blade	Aluminum	Aluminum
Indoor blower motor rating	1/3 HP	1 HP
Indoor blower motor speed	1,625 RPM	1,625 RPM

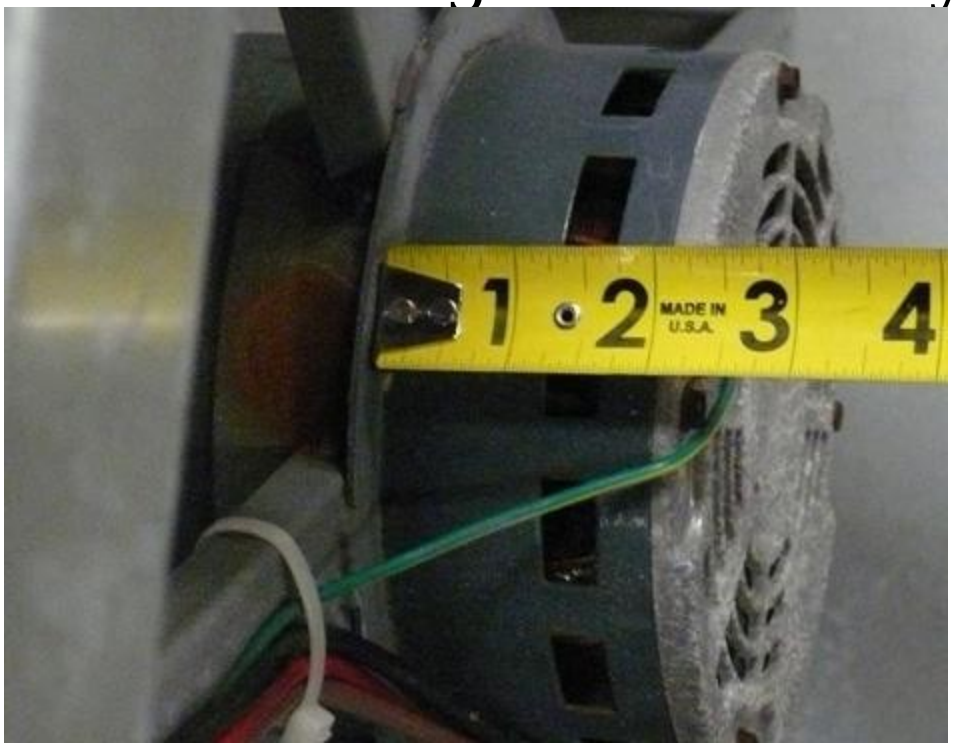
64% Increase in RPM

Investigation/Bulletin History

- SEB 1034 was released in July 2010 requiring a one time inspection of the indoor fan motor.
  - Checking for presence of flat point set screws vice knu

Investigation/Bulletin History

- SEB 1047 was released in October 2010 directing an inspection to ensure proper placement of the outdoor fan motor IRT the fan bracket, requiring a distance of 2 ¼” from fan motor to fan mounting assembly.

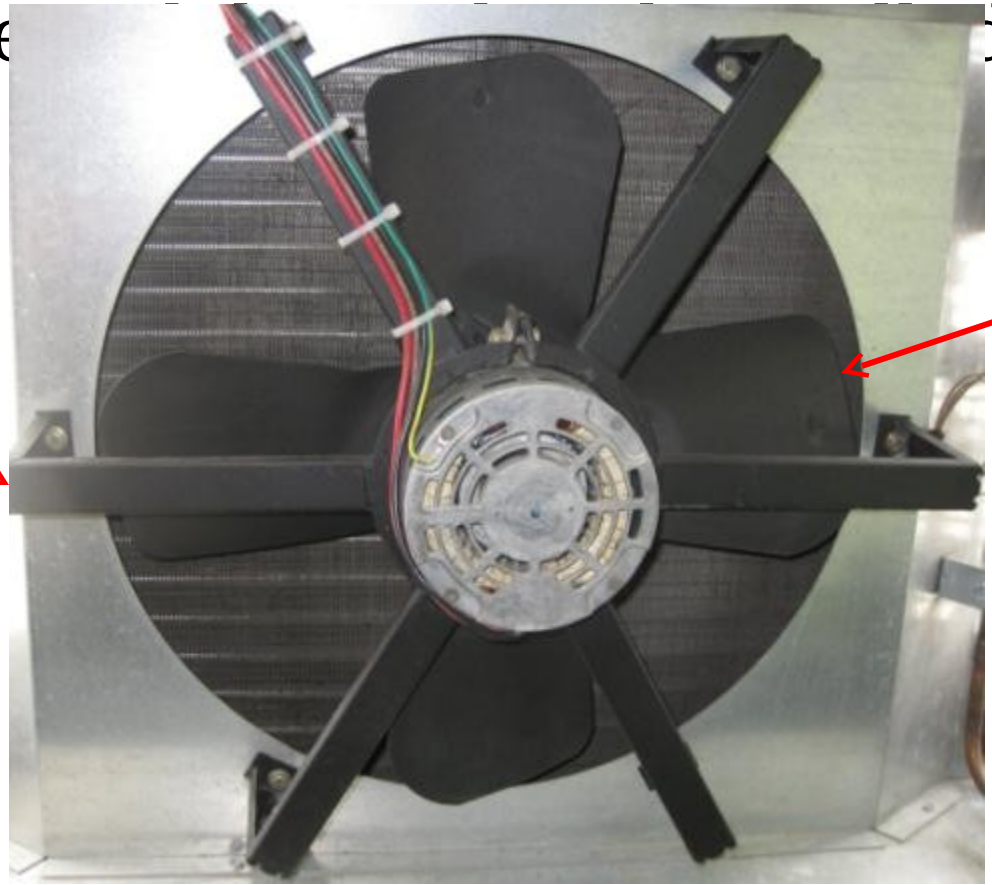


Investigation/Bulletin History

- Snowbird conducted an E.I. in Dec 2010 on MALS-14 asset that met the requirement of SEB 1047 but still suffered failure of the outdoor fan.

Solution

- After extensive research by Snowbird, two prototypes were released for testing trials in Jan. 2011.
- Units we[illegible]d @ MALS-14



Heavier duty bracket

Steel, heavier duty fan

Results

- One unit has ran with no problems for almost 180 days +.
- One unit suffered a outdoor lower fan motor loss after approximately 110 days.
  - LCdr Davis, Snowbird, & MF Program Office traveled to Ch Pt to install new Fan Motor. No problems since…

Recent Events & Comments

- 2 Catastrophic outdoor fan failures (20 June 2011)

Recent Events & Comments

- 1 outdoor fan motor failed (shorted to case) on 22 June 2011

Recent Events & Comments

- Wire routing

Recent Events & Comments

- Manufactured with sealant used through bulkhead and on motor

QUESTIONS ?